

**Deltorphin-D  
24 Hour Survival Study**

**Rationale:** To Investigate the effect opioid agonist, Deltorphin-D (Tyr-D-Leu-Phe-Ala-Asp-Val-Ser-Thr-Ile-Gly-Asp-Phe-Phe-His-Ser-Ile-NH<sub>2</sub>) on endotoxin mediated hepatotoxicity and lethality in a mouse model.

**Animals:** Female BALB/c mice were used at approximately 7 weeks of age.

**Study Parameters:** 1) Mortality and 2) Serum ALT (Indicator of liver injury)

**Results:** Each Group N=6; Average weight: 18.5 g

**Group I (Control)**

Treatment: PBS

Dose: 200µl/animal

Route of Administration: Intraperitoneal (I.P.)

Study end point: 24h.

Mortality: 0% (all 6 animals alive)

Serum ALT (IU/L): avg. 38

**Group II (Control)**

Treatment: PBS + Deltorphin D

Dose: PBS: 200µl/animal (t=0) Deltorphin-D: 4mg/kg; administered at t=0h

Route of Administration: Intraperitoneal (I.P.)

Study end point: 24h.

Mortality: 0% (all 6 animals alive)

Serum ALT (IU/L): avg. 49

**Group III**

Treatment: endotoxin (LPS) + Galactosamine (Galn)

Dose: LPS (100µg/kg) + Galn (700 mg/kg).

Route of Administration: Intraperitoneal (I.P.)

Study end point: 24h

Mortality: 100% (all 6 animals dead)

Serum ALT (IU/L): not measured (Note: Moribund animals (between 12 to 15 h post insult) have serum ALTs typically ranging from 2500 to 3500 IU/L)

**Group IV**

Treatment: LPS + Galn + Deltorphin-D

Dose: LPS (100µg/kg) + Galn (700 mg/kg) (t=0); Deltorphin D 4 mg/kg; administered at t=1h and t=+1h

Route of Administration: Intraperitoneal (I.P.)

Study end points: 24h.

Mortality: 33.33% (4 animals alive; 2 animals dead)

Serum ALT (IU/L): 4 living animals had ALT values of 640, 837, 956, and 1028 IU/L respectively.

ATTACHMENT "A"